JAGUAR

SERVICE BULLETIN

Number B.2
Section Engine

Sheet 1 (of 1)
Date January, 1960

IMPROVED ENGINE SUMP OIL SEALING

Models affected	Commencing Engine numbers
2.4 litre Mark 2	BG.1317
3.4 litre Mark 2	KG.1327
3.8 litre Mark 2	LA.1500
Mark IX	NC.6785
XK.150 (3.4 litre)	V.7460
XK.150 'S' (3.4 litre)	VS.2183
XK.150 (3.8 litre)	VA.1399
XK.150 'S' (3.8 litre)	VAS.1085

On cars with the above engine numbers and onwards, a modified crankshaft rear cover assembly (Part Number C.16317) with an eccentric oil seal groove is fitted at the rear of the cylinder block.

In conjunction with the modified rear cover a new cork/rubber seal (Part Number C.16315) is fitted.

For cars with engines prior to the above numbers, modified cork/rubber seal (Part Number 2302/S) and sump gaskets (Part Number C.16319) have been introduced.

Sump seals, gaskets and rear cover assemblies should be fitted in accordance with the following details:-

	Engines up to above numbers	Engines on and after above numbers
Cork/Rubber Seal	C.2302/S ($7\frac{7}{8}$" x 23/32" x 7/32")	C.16315 (8" x $\frac{1}{2}$" x 7/32")
Sump Gaskets	C.16319	C.16319
Crankshaft rear cover assembly	C.14400	C.16317

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JAGUAR SERVICE BULLETIN

Number B.3
Section Engine

Sheet 1 (of 1)
Date May, 1960

9 TO 1 COMPRESSION RATIO PISTONS

(XK.150 and 3.4 litre models)

Models affected	Commencing Engine Numbers
XK.150 (3.4 litre engine)	V.7524
XK.150'S' (3.4 litre engine)	VS.2195
3.4 litre Mark 2	KG.2807

On cars with the above engine numbers and onwards 9 to 1 compression ratio pistons with domed crowns are fitted replacing flat top pistons.

The domed crown piston (Part No. C.16339) can be used to replace the flat top piston (C.10649) provided a complete set is fitted. If it is desired to replace a single 9 to 1 compression ratio piston on 3.4 litre engines prior to the above numbers only Part number C.10649 must be used.

Spares Bulletin number A.33 refers.

CRANKSHAFT DAMPER IGNITION TIMING MARKS

Models affected

All

The top dead centre mark on the front face of the crankshaft damper is now continued on the edge of the damper to facilitate tuning the engine by means of Crypton "Motormaster" or similar testing equipment, the use of which we encourage.

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JAGUAR SERVICE BULLETIN

Number B.4
Section Engine

Sheet 1 (of 1)
Date May, 1960

PAPER ELEMENT AIR CLEANERS

Models affected

3.4 litre Mark 2
3.8 litre Mark 2
Mark 1X cars for certain export countries (replacing oil bath air cleaners)

Note that the above models, originally fitted with an oil bath type air cleaner, are now fitted with a paper element type air cleaner. (This does not apply to the 2.4 litre Mark 2 model which retains an oil bath air cleaner.)

No maintenance is necessary but the element (Part number C.16484) should be renewed every 10,000 miles (16,000 km) or more frequently in dusty territories.

This type of air cleaner is fitted on top of the cylinder head. To gain access to the element, unscrew the wing nut and remove the washer and top cover; the element can now be lifted out.

When replacing the element, ensure that it is seated correctly in the bottom plate. Also check that the rubber sealing ring between the bottom plate and the base is correctly fitted, otherwise air will by-pass the cleaner element.

DISTRIBUTOR DRIVE GEAR END-FLOAT

Models affected

All

The minimum end-float of the distributor drive gear has been increased from .003" (.07 mm) to .004" (.10 mm) by reducing the thickness of the thrust washer.

/Cont...

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It is important when assembling the drive gear to check the end-float and ensure that it is not less than .004". If the end-float is found to be less than this figure, the phosphor-bronze distributor gear should be examined for signs of indentation by the shoulder of the drive shaft. If indented, a new distributor drive gear should be fitted. Otherwise, the thrust washer can be reduced in the thickness by rubbing down on a piece of emery cloth placed on a surface plate.

Amendment to the 2.4/3.4 litre Service Manual

On page B.24 under the heading "Fit Distributor and Oil pump drive gear" amend end-float to read .004" to .006" (.10 to .15 mm).

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JAGUAR SERVICE BULLETIN

Number B.6
Section Engine

Sheet 1 (of 1)
Date July, 1960

SPARKING PLUGS RECOMMENDATION - U.S.A., CANADA AND MEXICO

Models affected

Mark IX, 8 to 1 compression ratio
3.8 litre Mark 2, 8 to 1 compression ratio
3.4 litre Mark 2, 8 to 1 compression ratio
XK.150 (3.4 litre), 8 to 1 compression ratio
XK.150 (3.8 litre), 8 to 1 compression ratio

Note that for the U.S.A., Canada and Mexico Champion N.8 sparking plugs are recommended in place of N.5 type for the above models.

It must be noted however that N.8 type sparking plugs must NOT be used on 9 to 1 compression engines, XK.150 'S' or 2.4 litre engines.

REBORING AND FITTING CYLINDER LINERS

(3.8 litre engines)

3.8 litre engines are fitted with cylinders liners in initial production. Reboring of the cylinder liners is permissible up to a maximum of .030" (.76 mm); oversize pistons are obtainable in +.010", +.020" and +.030" (+.25 mm, +.51 mm and +.76 mm) size by quoting /10, /20 or /30 after the part number of the standard size piston.

After the engine has been rebored to +.030" (+.76 mm), or if the bores will not clean up at .030", it will be necessary to replace the cylinder liners, bore out to standard and fit standard sized pistons.

The worn liners must be pressed out from the bottom using a stepped block (see illustration).

Before fitting the new liner lightly smear the cylinder walls with jointing compound at a point half-way down the bore and also smear the top outer surface of the liner.

Press in the new liners from the top and file, or lightly skim, the tops of the liners flush with the top face of cylinder block.

/Continued...

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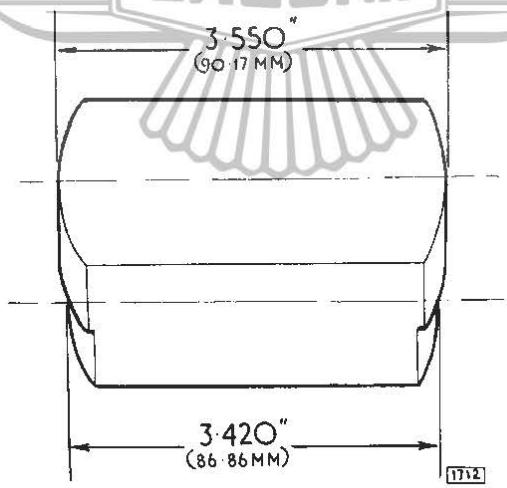
Note: Bore out and hone the liners in accordance with the following details to suit the grade (or grades) of pistons to be fitted.

Piston Grade Letter	Cylinder bore size
"F"	3.4248" to 3.4251" (86.990 to 86.997 mm)
"G"	3.4252" to 3.4255" (87.000 to 87.007 mm)
"H"	3.4256" to 3.4259" (87.010 to 87.017 mm)
"J"	3.4260" to 3.4263" (87.020 to 87.027 mm)
"K"	3.4264" to 3.4267" (87.030 to 87.037 mm)

The piston clearance measured at the bottom of the skirt at 90° to the gudgeon pin axis is .0011" to .0017" (.028 to .043 mm).

Note: After removal of the cylinder head studs prior to reboring, it is advisable to check the area around the stud holes for flatness. If the edges of any of the holes are found to be raised they should be filed down flush with the surrounding joint face, to ensure a dead flat surface on which to mount the boring equipment.



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SERVICE BULLETIN

Number B.7
Section Engine

Date July, 1960

TUNING DATA FOR ENGINES WITH PAPER ELEMENT AIR CLEANERS

The following are the revised tuning details for engines fitted with a paper element air cleaner (see Service Bulletin B.4) and supplements the information given in Service Bulletin A.1.

3.4 litre Mark 2

Compression Ratio	Carburetter Needles	Distributor Type and Contact Breaker Gap Jaguar Part No. / Lucas Service No.	Static Ignition Timing
8 to 1	T.U.	C14533 40640A .014" - .016"	7° BTDC

3.8 litre Mark 2

8 to 1	T.U.	C14533 40640A .014" - .016"	7° BTDC
9 to 1	T.U.	C14534 40665A .014" - .016"	5° BTDC

Mark IX

7 to 1	T.M.	C14533 40640A .014" - .016"	TDC

Amendment to Service Bulletin No. A.1

Alter the ignition timing of the 9 to 1 compression ratio 3.8 litre engine from 5° BTDC to 10° BTDC.

/Continued...

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Amendment to Service Bulletin No. A.3 of May, 1960

Alter the number of the above bulletin issued in May, 1960 from A.3 to A.4

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SERVICE BULLETIN

Number B.7 (2nd issue)
Section Engine

Sheet 1 (of 1)
Date November, 1960

ENGINE TUNING DATA

(Mark 2 models, Mark 1X model)

The following is a summary of the engine tuning data for the above models and supersedes the original issue of Service Bulletin B.7 in July, 1960.

2.4 litre Mark 2

Compression Ratio	Air Cleaner	Carburetter Needles	Distributor Type and Contact Breaker Gap Jaguar Part No. / Lucas Service No.	Static Ignition Timing	Champion Sparking Plug Type and Gap
7 to 1	Oil bath	-	C8789 40557A .014" - .016"	6° BTDC	L.7 (.025")
8 to 1	Oil bath	-	C11903 40528A .014" - .016"	8° BTDC	N.5 (.025")

3.4 litre Mark 2

7 to 1	Oil bath	S.C.	C12733 40578A .014" - .016"	TDC	L.7 (.025")
8 to 1	Oil bath	S.C.	C12732 40576A .014" - .016"	2° BTDC	N.5 6 (.025")
9 to 1	Oil bath	S.C.	C14269 40617A .014" - .016"	TDC	N.5 (.025")
7 to 1	Paper element	T.M.	C14533 40640A .014" - .016"	TDC	N.5 (.025")
8 to 1	Paper element	T.U.	C14533 40640A .014" - .016"	7° BTDC	N.5 6 (.025")
9 to 1	Paper element	T.U.	C14534 40665A .014" - .016"	5° BTDC	N.5 (.025")

/Continued...

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Compression ratio	Air Cleaner	Carburetter Needles	Distributor Type and Contact Breaker Gap Jaguar Part No. / Lucas Service No.	Static Ignition Timing	Champion Sparking Plug Type and Gap
3.8 litre Mark 2					
7 to 1	Oil bath	T.X.	C14533 40640A .014" - .016"	TDC	N.5 (.025")
8 to 1	Oil bath	S.C.	C14533 40640A .014" - .016"	4° BTDC	N.5 ♁ (.025")
9 to 1	Oil bath	S.C.	C14534 40665A .014" - .016"	10° BTDC	N.5 (.025")
7 to 1	Paper element	T.M.	C14533 40640A .014" - .016"	TDC	N.5 (.025")
8 to 1	Paper element	T.U.	C14533 40640A .014" - .016"	7° BTDC	N.5 ♁ (.025")
9 to 1	Paper element	T.U.	C14534 40665A .014" - .016"	5° BTDC	N.5 (.025")
Mark IX					
7 to 1	Felt	T.U.	C14533 40640A .014" - .016"	4° BTDC	N.5 (.025")
8 to 1	Felt	T.U.	C14533 40640A .014" - .016"	4° BTDC	N.5 ♁ (.025")
9 to 1	Felt	T.U.	C14534 40665A .014" - .016"	5° BTDC	N.5 (.025")
7 to 1	Paper element	T.M.	C14533 40640A .014" - .016"	TDC	N.5 ♁ (.025")
8 to 1	Paper element	T.U.	C14533 40640A .014" - .016"	7° BTDC	N.5 ♁ (.025")
9 to 1	Paper element	T.U.	C14534 40665A .014" - .016"	5° BTDC	N.5 (.025")

♁ For U.S.A., Canada and Mexico use N.8 plugs

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SERVICE BULLETIN

Number B.8
Section Engine

Sheet 1 (of 1)
Date November, 1960

BRAY ENGINE HEATER BOSS

Models affected	Commencing Engine Numbers
3.4 litre Mark 2	KG.4104
3.8 litre Mark 2	LA.7214
Mark IX	NC.9709
XK.150 (3.8 litre engine)	VA.2053
XK.150'S' (3.8 litre engine)	VAS.1285

On cars with the above engine numbers and onwards the boss in the cylinder block, which provides for the fitting of an electric engine heater, has been transferred from the left hand side to the right hand side. The boss has been transferred to avoid obstruction from the exhaust pipes when fitting a Bray engine heater.

Spares Bulletin number A.41 refers.

MODIFIED ENGINE OIL FILTER

Models affected	Commencing Engine Number
2.4 litre Mark 2	BG.5891
3.4 litre Mark 2	KG.4675
3.8 litre Mark 2	LA.7450

On cars with the above engine numbers and onwards a modified oil filter (Part number C.16296) is fitted. The canister of the new oil filter is inclined downwards and therefore no drain plug is fitted. The oil pressure relief valve is retained by the outlet adaptor to which oil return hose is fitted and must not be confused with the balance valve (see illustration overleaf). The element (Part number 1526 - FG.2306) and sealing ring (Part number 6883) are the same as fitted to the previous type of oil filter.

Spares Bulletin number A.40 refers.

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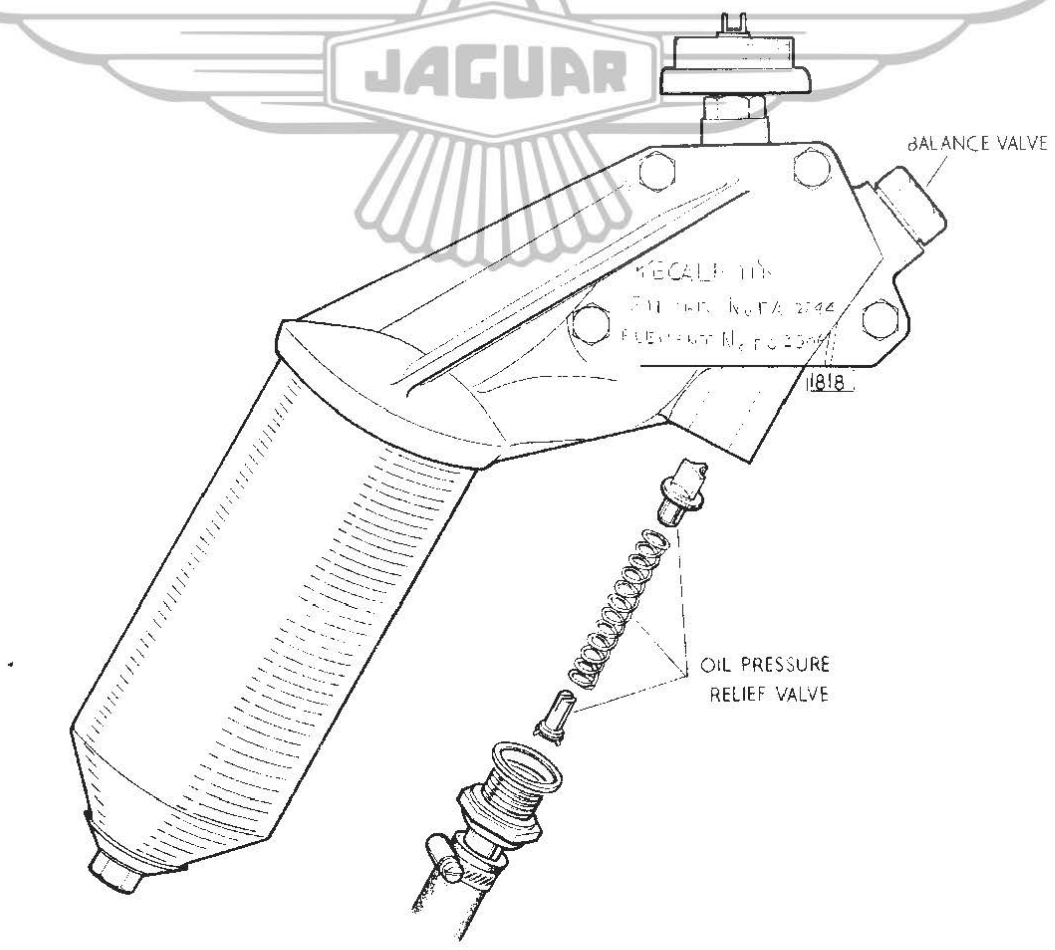

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JAGUAR SERVICE BULLETIN

Number B.9
Section Engine

Sheet 1 (of 1)
Date February, 1961

DOWNSWEPT OIL FILTER - LEAKAGE FROM FLANGE FACE

If on engines with the downward pointing oil filter (see Service Bulletin B.8) oil leakage is experienced between the filter head and cylinder block faces, the unit should be removed and the following procedure carried out.

1. Remove the canister and element. Clean the oil from the filter head casting by washing in a suitable solvent and thoroughly dry out.

2. Reface the oil filter joint face by rubbing on a piece of emery cloth placed on a surface plate or on a piece of plate glass. Take great care not to round off the corners or edges of the casting.

3. Thoroughly clean off all traces of metal dust and re-assemble the filter unit.

4. Use a new type "Presspahn" gasket C.16301 and before assembly lightly coat each side with a good quality jointing compound.

5. Fit a longer setscrew Part number UFB.131/10R to the bottom right-hand corner position with a special washer C.18458 under the bolt head.

6. Start engine and recheck for oil leakage. Recheck tightness of filter bolts after initial running.

Spares Bulletin A.47 refers.

INTRODUCTION OF DIPSTICK TUBE

Models Affected	Commencing Engine Numbers
3.4 litre Mark 2	KG5366
3.8 litre Mark 2	LA.8593

On cars with the above engine numbers and onwards a tube is fitted to the dipstick hole in the cylinder block to facilitate replacement of the dipstick. This necessitates having a new dipstick (Part number C.17527) of greater length between the stop and the bottom end.

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Spares Bulletin No. A.44 refers.

JAGUAR SERVICE BULLETIN

Number B.10
Section Engine

Sheet 1 (of 1)
Date June, 1961

LONGER OIL PUMP AND NEW OIL SUMP

Models affected	Commencing Engine Numbers	
	Sump	Oil Pump
2.4 litre Mark 2	BG.8498	BG.9503
3.4 litre Mark 2	KG.6738	KG.7488
3.8 litre Mark 2	LB.1850	LB.2402
"E" Type	-	R.1009

On cars with the above engine numbers an oil pump with a longer body is fitted. On the Mark 2 models this necessitates having a sump with a slight depression at the front end to avoid the pump fouling the bottom of the sump.

The new sump (Part number C.17645) can be fitted to engines prior to the numbers given above for the introduction of the new oil pump, but the early type sump (Part number C.15964) must not be fitted to engines with the longer bodied oil pump.

Spares Bulletins A.50 and A.51 refers.

ENGINE BREATHER

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.1166
3.4 litre Mark 2	KG.8272
3.8 litre Mark 2	LB.3922

On cars with the above engine numbers and onwards the engine breather is coupled to the air intake elbow connected to the carburetters.

Spares Bulletin number A.52 refers.

EXHAUST MANIFOLD FLANGE NUTS

(All models)

At the 500 mile (800 km) free service it is recommended that the exhaust manifold flange nuts are checked for tightness.

This operation will be included in future reprints of the "Periodic Maintenance Voucher" booklets.

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SERVICE BULLETIN

Number B.11
Section Engine

Sheet 1 (of 1)

Date August, 1961.

UNDRILLED INLET CAMSHAFTS

Models affected	Commencing Engine Numbers
3.4 litre Mark 2	KG.9484
3.8 litre Mark 2	LA.5312
"E" Type	R.1217

On cars with the above engine numbers and onwards a modified inlet camshaft (Part number C.17138) is fitted. This camshaft does not have a hole drilled in the base of each cam as shown in Service Bulletin number 209, and is interchangeable with the previous one.

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CAST IRON CRANKSHAFT PULLEY

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.3894
3.4 litre Mark 2 (Power assisted steering)	KG.1349
3.8 litre Mark 2 (Power assisted steering)	LB.6271
"E" Type	R.1459

On cars with the above engine numbers and onwards, a cast iron crankshaft pulley, Part Number C.18702 (2.4 litre C.18704) is fitted. This pulley replaces the aluminium pulley formerly fitted and is interchangeable with this pulley.

Spares Bulletin Number A.57 refers.

AUTOMATIC FAN BELT TENSIONER

Models affected	Commencing Engine Numbers
3.4 litre Mark 2 (Power assisted steering)	KH.2146
3.8 litre Mark 2 (Power assisted steering)	LB.7222
"E" Type	R.1845

Cars with the above engine numbers and onwards are fitted with a spring-loaded jockey pulley on the right-hand side of the engine. This pulley maintains the correct fan belt tension without adjustment but should it be necessary to replace the fan belt the following instructions should be carried out.

Slacken the two bolts securing the dynamo to the mounting bracket. Remove the nut and unscrew the bolt securing the top dynamo link to the dynamo. Slacken the bolt securing the dynamo

/Continued...

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link to the engine and press the dynamo as far as possible towards the engine. Place the new belt in position on the water pump, jockey and crankshaft pulleys and by pressing the jockey pulley towards the engine pass the belt over the dynamo pulley. Pass the dynamo securing top bolt through the link and screw into the lug of the dynamo. Pull the dynamo away from the engine as far as possible and tighten the top dynamo securing bolt and replace the lock nut. Tighten the bolt securing the dynamo link to the engine and also the two bottom dynamo mounting bolts.

Amendment to Service Bulletin Number B.11.

Under commencing Engine Numbers in the above bulletin insert the following:-

2.4 litre Mark 2	BH.2900

The part number for the 2.4 litre undrilled camshaft is C.17137.

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Number B.13
Section Engine

Sheet 1 (of 1)
Date December, 1961

SUMP REMOVAL

("E" Type)

A simpler method of removing the sump than that described in the "E" Type Service Manual has been found. This method obviates the removal of the torsion bar reaction tie plate but it will be necessary to remove the crankshaft damper.

Drain the sump, disconnect the oil return hose, remove the crankshaft damper, remove the sump securing setscrews and withdraw the sump forward.

CRANKSHAFT REAR OIL SEAL

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.4551
3.4 litre Mark 2	KH.2794
3.8 litre Mark 2	LB.8247
"E" Type	R.2564
Mark 10	ZA.1001

On cars with the above engine numbers and onwards, a modified rear end cover incorporating an asbestos rope oil seal in an annular groove is introduced. A modified crankshaft is also introduced in conjunction with this new seal.

Spares Bulletin number A.66 refers.

DIPSTICK GUIDE TUBE

Models affected	Between Engine Numbers
3.4 litre Mark 2	KG.2095 and KG.5365
3.8 litre Mark 2	LA.2782 and LA.8592

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Parts required:-

C.19964	Dipstick guide tube	1 off
UFB.131/13R	Bolt	1 off
C.12344	Distance piece	1 off
FW.105/T	Plain washer	1 off

Difficulty has sometimes been experienced in replacing the dipstick on cars with the above Engine numbers fitted with "swept-back" exhaust manifolds but not fitted with a dipstick guide tube. To deal with this condition, a guide tube has been designed to be attached to the clutch housing support bracket securing bolt nearest the dipstick boss.

To fit the guide tube, remove the forward support bracket securing bolt and replace it with a longer one. (UFB.131/13 R).

Place the distance piece (C.12344) over the bolt and on top of the cylinder block flange. Place the dipstick guide tube over the dipstick boss so the elongated hole in the bracket fits over the bolt and on top of the distance piece and secure loosely with the plain washer (FW.105/T) and the original spring washer and nut. Taper the extreme end of the dipstick blade to facilitate entry and insert the dipstick through the guide tube and into the cylinder block. Having thus lined up the guide tube and dipstick hole, tighten the securing nut and bolt.

Amendment to Service Bulletin number B.12

The part numbers of the cast iron crankshaft pulley quoted in the above bulletin should read, C.18703 (2.4 litre C.18904).

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JAGUAR SERVICE BULLETIN

Number B.14.
Section Engine

Sheet 1 (of 1)
Date January, 1962

EXHAUST MANIFOLD FLANGE GASKETS

Models affected	Commencing Chassis Numbers	
	R.H. Drive	L.H. Drive
3.4 litre Mark 2	158296	177750
3.8 litre Mark 2	207228	219614

On cars with the above chassis numbers and onwards, a new type of exhaust manifold flange gasket with a steel shell is introduced (Part number C.18405/1).

This gasket is used in conjunction with modified exhaust manifolds and exhaust down pipe and parts are therefore not interchangeable.

CYLINDER HEADS

(Mark IX, 3.8 litre Mark 2, 3.8 litre XK.150)

The chamfer machined on the combustion chambers of cylinder heads fitted to 3.8 litre engines (with the exception of the "S" type - Gold top head) is no longer used, thus standardizing the cylinder head casting with those used on 2.4 and 3.4 litre engines. The cylinder head identification colour of dark blue will continue as before.

If replacing either cylinder head or pistons on any 3.8 litre 8 to 1 compression ratio engine, it is essential that the following facts should be noted. (Piston part numbers are stamped on the flat portion of the crown of the piston).

Chamfered Cylinder Heads

May be fitted with C.14806 or C.14806/1 pistons in sets.

Unchamfered Cylinder Heads

Must only be fitted with C.14806/1 pistons which have a

/Continued overleaf.....

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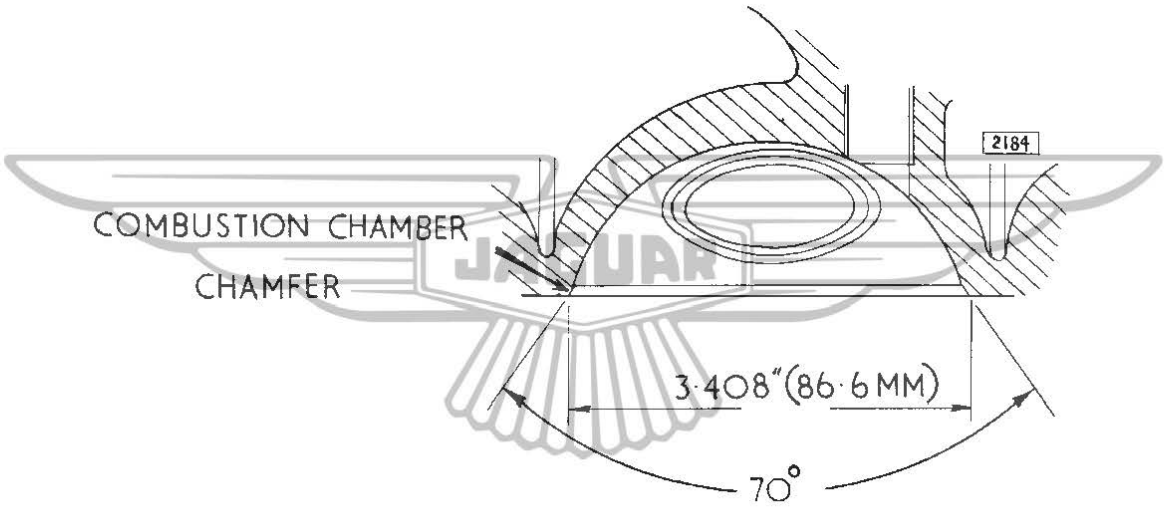
modified crown to prevent fouling between the piston and cylinder head.

Note: Prior to the following engine numbers, the C.14806 piston was fitted, therefore, an unchamfered cylinder head must not be fitted unless the combustion chambers are machined with a chamfer or a set of C.14806/1 pistons is fitted.

Mark IX NC.7282 XK.150 (3.8 litre) VA.1543

Mark 2 (3.8 litre) LA.2578



Amendment to Service Bulletin Number B.12.

Include the following information on Bulletin B.12.

Since the issue of the above bulletin the cast iron crankshaft pulley and automatic fan belt tensioner have been introduced on cars with the following engine numbers.

	Engine Number
3.4 litre Mark 2 (with manual steering)	KH.3116
3.8 litre Mark 2 (with manual steering)	LB.8868

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SERVICE BULLETIN

Number B.15.
Section Engine

Sheet 1 (of 1)
Date February, 1962

REDUCED BIG END CLEARANCES

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.5165
3.4 litre Mark 2	KH.3229
3.8 litre Mark 2	LB.9109
"E" Type	R.3162
Mark 10	ZA.1054

On cars with the above engine numbers and onwards, new big end bearings (Part No. C.18712) with reduced running clearances are fitted. These bearings may be fitted in place of the previous type, provided that they are fitted in pairs.

The running clearance is reduced from .0023" - .0039" (.06mm - .10mm) to .0015" - .0033" (.04mm - .08mm).

Amendment to Service Bulletin Number B.14.

Since the issue of the above Service Bulletin, it has been found to be permissible to fit the latest steel/asbestos exhaust manifold gasket as a replacement for Part Number C.8981 in conjunction with the early type of manifolds and downpipes.

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SERVICE BULLETIN

Number B.16.
Section Engine

Sheet 1 (of 1)
Date March, 1962

MODIFIED SEAL AT THE REAR OF EXHAUST CAMSHAFT COVER

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.5531
3.4 litre Mark 2	KH.3644
3.8 litre Mark 2	LC.1100
"E" Type	R.3691

On cars with the above engine numbers and onwards, a revised method of sealing the rear end of the left hand (exhaust) camshaft cover is introduced. This arrangement may be fitted to engines prior to those shown above provided that a modified camshaft cover, sealing plug and 'O' ring are fitted.

Spares Bulletin number A.76 refers.

INTRODUCTION OF DUPLEX FAN BELT

Model affected	Commencing Engine Number
2.4 litre Mark 2	BH.5365

On cars with the above engine number and onwards, a single fan belt (Part No. C.19523) having twin "vee" tracks is introduced. The dynamo, crankshaft and water pump pulleys are also modified to suit the new fan belt. The new fan belt may be fitted to engines with numbers prior to that shown above provided that modified dynamo, crankshaft and water pump pulleys are also fitted.

Spares Bulletin number A.74 refers.

MODIFIED CYLINDER HEAD GASKET

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.5531
3.4 litre Mark 2	KH.3644
3.8 litre Mark 2	LC.1100
"E" Type	R.3691

On cars with the above engine numbers and onwards, a modified

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/Continued overleaf...

cylinder head gasket (Part No. C.19112 - 2.4 and 3.4 litre, C.19113 - 3.8 litre and "E" Type) is fitted. This gasket has enlarged main cylinder head stud holes and is interchangeable with the gasket fitted previously.

It is recommended that the cylinder head nuts are re-checked for tightness at the First 500 miles (Free) Service. The correct torque figure for the cylinder head nuts is 54 lb. ft. - 650 lb. ins. (7.5 kg.m).

Spares Bulletin number A.76 refers.

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Number B.17.
Section Engine

Sheet 1 (of 1)
Date April, 1962

INTRODUCTION OF DUPLEX FAN BELT

Models affected	Commencing Engine Numbers
3.4 litre Mark 2	KH.4093
3.8 litre Mark 2	LC.1672

On cars with the above engine numbers and onwards, a single fan belt (Part No. C.19522) having twin "vee" tracks is introduced. The water pump, dynamo, crankshaft and jockey pulleys are also modified to suit the new fan belt. This fan belt may be fitted to engines with numbers prior to that shown above, provided that modified dynamo, crankshaft, water pump and jockey pulleys are also fitted.

Spares Bulletin number A.77 refers.

MODIFICATION TO BREATHER PIPE TO OVERCOME CONDENSATION

Models affected	Commencing Engine Numbers
Mark 10	ZA.1357
"E" Type	R.4223

To avoid the possibility of water condensation being drawn into the engine via the breather pipe, a 1/16" (1.6 mm) hole is drilled in the underside of the pipe. This hole is situated approximately 6½" (16.5 cm) inwards from the bend beneath the rubber connection which attaches the breather pipe to the air cleaner.

MODIFIED OIL SUMP

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.5853
3.4 litre Mark 2	KH.4020
3.8 litre Mark 2	LC.1506

On cars with the above engine numbers and onwards, a modified oil sump (Part No. C.19922) is fitted. The oil return hose to sump connection has been modified to provide easier fitment.

The sump is only interchangeable on Mark 2 models having the

/Continued...

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oil filter inclined downwards. On Mark 1 and early Mark 2 cars having the oil filter in an upwards direction, the sump cannot be fitted.

Spares Bulletin number A.78 refers.

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JAGUAR SERVICE BULLETIN

Number B.17. (2nd issue)
Section Engine

Sheet 1 (of 1)
Date May, 1962

This Service Bulletin supersedes the original issue of Bulletin B.17. of April, 1962 which should be destroyed.

INTRODUCTION OF DUPLEX FAN BELT

Models affected	Commencing Engine Numbers
3.4 litre Mark 2	KH.4093
3.8 litre Mark 2	LC.1672

On cars with the above engine numbers and onwards, a single fan belt (Part No. C.19522) having twin "vee" tracks is introduced. The water pump, dynamo, crankshaft and jockey pulleys are also modified to suit the new fan belt. This fan belt may be fitted to engines with numbers prior to that shown above, provided that modified dynamo, crankshaft, water pump and jockey pulleys are also fitted.

Spares Bulletin number A.77. refers.

MODIFICATION TO BREATHER PIPE TO OVERCOME CONDENSATION

Models affected	Commencing Engine Numbers
Mark 10	ZA.1357
"E" Type	R.4223

To avoid the possibility of water condensation being drawn into the engine via the breather pipe, a 1/16" (1.6 mm) hole is drilled in the underside of the pipe. This hole is situated approximately 6½" (16.5 cm) inwards from the bend beneath the rubber connection which attaches the breather pipe to the air cleaner.

MODIFIED OIL SUMP

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.5853
3.4 litre Mark 2	KH.4020
3.8 litre Mark 2	LC.1506

On cars with the above engine numbers and onwards, a modified oil sump (Part No. C.2003) is fitted. The oil return hose to sump

/Continued...

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connection has been modified to provide easier fitment.

The new sump is interchangeable with the earlier sump (Part No. C.17645). It may also be used as a replacement for oil sump (Part No. C.15964) on engines bearing the following numbers:-

Models	Engine Number
2.4 litre	BG.5891 to BG.8497
3.4 litre	KG.4675 to KG.6737
3.8 litre)	LA.7450 to LA.9999
)	LB.1001 to LB.1849

Spares Bulletin number A.78 (2nd issue) refers.

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SERVICE BULLETIN

Number B.18.
Section Engine

Sheet 1 (of 1)
Date May, 1962

DRILLED INLET CAMSHAFTS

Models affected	Commencing Engine Numbers
3.4 litre Mark 2	KH.4632
3.8 litre Mark 2	LC.2056
"E" Type	R.5001
Mark 10	ZA.1730

On cars with the above engine numbers and onwards, a modified inlet camshaft (Part No. C.14985) is fitted. This camshaft has a hole drilled in the base of each cam to reduce tappet noise when starting from cold, and is fully interchangeable with the previous type fitted.

See also Service Bulletins B.11 and 209.

Spares Bulletin number A.81 refers.

Amendment to Service Bulletin B.14.

Since the issue of the above bulletin, the new type of exhaust manifold flange gasket with a steel shell (Part No. C.18405/1) is introduced on 2.4 litre Mark 2 models.

Include the following information on Bulletin B.14.

Commencing Chassis Number

R.H. Drive	L.H. Drive
112355	126735

Amendment to Service Bulletin F.3.

Please note that Service Bulletin F.3. was incorrectly numbered and should have been F.2. Would you please alter your copy accordingly.

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JAGUAR SERVICE BULLETIN

Number B.20.
Section Engine

Sheet 1 (of 1)
Date September, 1962

LONGER INLET VALVE GUIDE

Model affected	Commencing Engine Number
"E" Type	R.6724

Commencing at the above engine number, a longer inlet valve guide (Part No. C.15509) is introduced on "E" Type cars and therefore brings it into line with all other current production models.

The longer valve guide is interchangeable with that previously supplied provided they are fitted in engine sets. The fitted distance of 5/16" (8 mm) above the spot face for the valve spring seat remains the same.

Spares Bulletin number A.93 refers.

CHAMPION UN.12.Y SPARKING PLUG

Models affected	Commencing Engine Numbers
3.8 litre Mark 2	LC.3051
Mark 10	ZA.2327

Commencing at the above engine numbers, Champion UN.12.Y sparking plugs replace those already fitted.

This sparking plug supersedes the N.5 plug previously fitted and overcomes fouling of the electrodes under heavy traffic conditions.

CHAMPION N.5 SPARKING PLUG

Model affected	Commencing Engine Number
3.4 litre Mark 2 7 to 1 compression ratio	KH.6127

Commencing at the above engine number, Champion N.5 sparking plugs are fitted to 7 to 1 compression ratio engines and supersedes the L.7 plug previously recommended.

/Continued...

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INTERMEDIATE MAIN BEARING CRANKSHAFT CLEARANCE

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH.7122 to BH.7230 BH.7258 onwards
3.4 litre Mark 2	KH.6100
3.8 litre Mark 2	LC.3498
"E" Type	R.6724
Mark 10	ZA.2574

Commencing at the above engine numbers and onwards, the intermediate main bearing clearance is brought into line with the front, centre and rear main bearings. All main bearing journals are now of 2.750" to 2.7505" diameter.

The crankshaft, part number remains unchanged, is directly interchangeable with the previous types fitted.

CAST IRON WATER PUMP AND FAN PULLEY

(2.4 litre Mark 2 Model)

Commencing at engine number BH.7206, a cast iron water pump/fan pulley (Part No. C.20176) replaces the aluminium pulley originally fitted and is interchangeable with this pulley.

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JAGUAR SERVICE BULLETIN

Number B.21.
Section Engine

Sheet 1 (of 1)
Date September, 1962

MODIFIED PISTON RINGS AND CONNECTING ROD

Models affected	Commencing Engine Numbers
3.8 litre Mark 2	LC.3703
Mark 10	ZA.3153
"E" Type	R.7104

Commencing at the above engine numbers and onwards, all 3.8 litre engines are fitted with a new top compression ring (Part No. C.20846), "Maxiflex" scraper ring (Part No. C.20847) and connecting rod (Part No. C.7917/2). The piston itself remains unaltered.

The upper compression ring has a 40^{o} chamfer on the inner edge of the ring which must face the top of the piston ring groove. The ring is marked with a "T" on the top face.

The new "Maxiflex" oil control ring consists of two steel rails with a spacer between the two rails. These are held together on assembly with an adhesive. The equaliser which is fitted inside the oil control ring should be assembled with the two ends butted together and positioned at 180^{o} to the gap. (See Fig.1.). It is most important that the two ends of the equaliser do not overlap. After fitting the rings they should be immediately compressed with a good piston clamp (such as the Churchill 38 U.2) and held in a state of compression until entered in the cylinder bore.

The connecting rod is changed inasmuch as a hole 1/32" (.79 mm) diameter is drilled at 45^{o} and 5.7/16" (13.81 cm) from the centre of the big end bearing bore on the same side at the big end bearing shell retaining groove. (See Fig.2.). When fitted the hole in the con rod must face forward and be pointing to the thrust (inlet) side of the engine.

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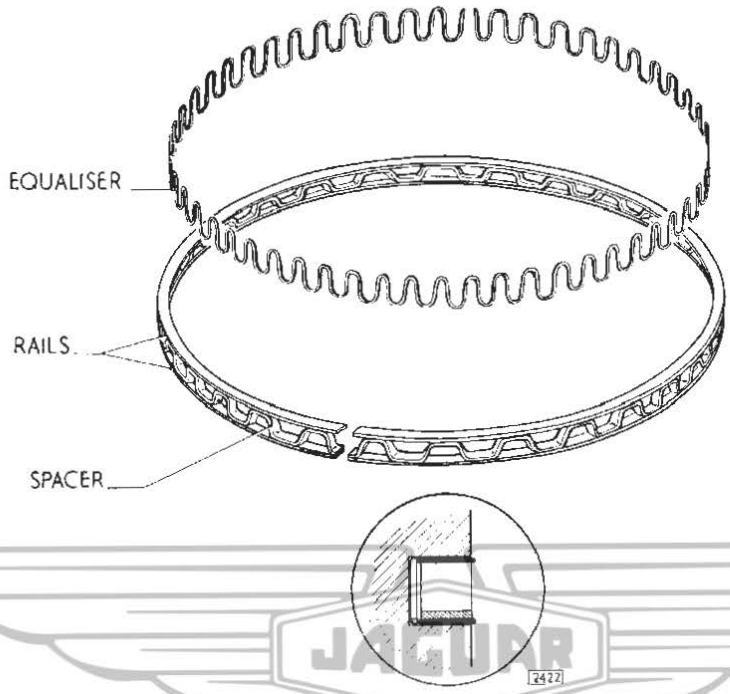

FIG 1

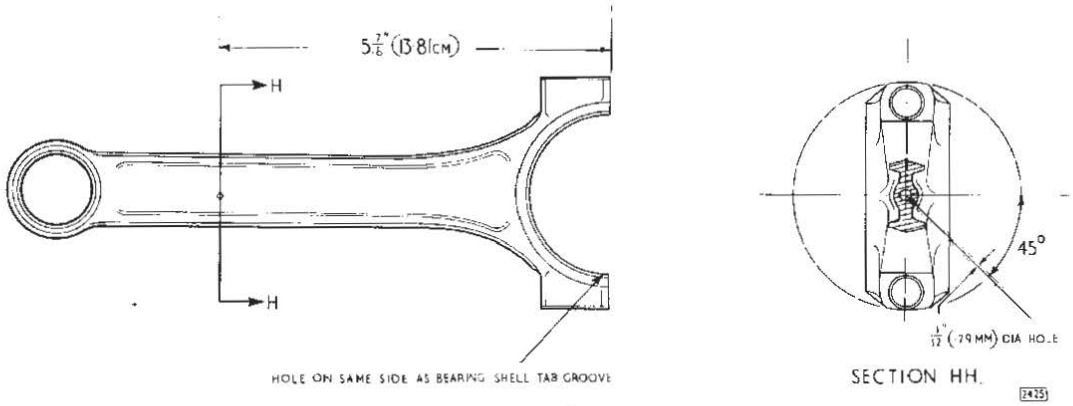

FIG 2

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SERVICE BULLETIN

Number B.22
Section Engine

Sheet 1 (of 1)
Date October, 1962.

LARGER MAIN BEARING CAP DOWELS

Models affected	Commencing Engine Numbers
2.4 litre Mark 2	BH. 7969
3.4 litre Mark 2	KH. 6481
3.8 litre Mark 2	LC. 3827
'E' Type	R. 7195
Mark 10	ZA. 3171

Commencing at the above engine numbers all cylinder blocks and bearing caps are machined to accomodate larger dowels on the left hand side. The original dowels are still used on the right hand side.

Spares Bulletin No: A.94 refers

CHAMPION N.5. SPARKING PLUG

Model affected	Commencing Engine Number
2.4 litre Mark 2 7 to 1 compression ratio	BH. 7655

Commencing at the above engine number Champion N.5 sparking plugs are fitted to 7 to 1 compression ratio engines and supercedes the L.7 plug previously recommended.

Spares Bulletin No: A.97 refers

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JAGUAR SERVICE BULLETIN

Number B.23.
Section Engine.

Sheet 1 (of 1)
Date November, 1962.

INTRODUCTION OF FIVE BOLT OIL FILTER.

Models affected.	Commencing Engine Numbers.
2.4 litre Mark 2	BH. 7969.
3.4 litre Mark 2	KH. 7063.
3.8 litre Mark 2	LC. 4265.

Commencing at the above engine numbers the oil filter (Part No. C 20525) is retained by five bolts instead of the previous four.

A rubber seal is fitted to the oil pressure relief valve and also to the balance valve.

The filter unit is not interchangeable with the previous type fitted.

Spares Bulletin A.103 refers.

INTRODUCTION OF LENGTHENED DIPSTICK

Models affected.	Commencing Engine Numbers.
2.4 litre Mark 2	BH. 7671
3.4 litre Mark 2	KH. 7310
3.8 litre Mark 2	LC. 4461
Mark 10	ZA. 3972.

Commencing at the above engine numbers, a dipstick with a lengthened handle to clear the exhaust is fitted. It is interchangeable with the previous type fitted.

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JAGUAR SERVICE BULLETIN

Number B.27.
Section Engine.

Sheet 1 (of 1)
Date June, 1963.

MODIFIED OIL PUMP AND ¾" OIL PIPE.

Model affected.	Commencing Engine Number.
'E' Type	RA. 2078

Commencing at the above engine number, a modified oil pump and ¾" (19.05 mm) diameter oil suction pipe replace the existing oil pump and 11/16" (17.46 mm) oil pipe.

These parts are interchangeable provided all the items listed in Spares Bulletin No. A.119 are fitted.

CHECKING FOR OIL CONSUMPTION.

(All Models)

In a great many cases of cars reported to have heavy oil consumption it has been found, on investigation at the factory, that in fact the consumption has been very low or none at all.

This false impression has been due to distributor and dealers not checking for oil consumption in the correct manner. Owing to the length of time needed for all the oil to drain back into the sump, estimating oil consumption during normal "topping up" is misleading and the following procedure should be adopted.

WHEN INVESTIGATING A COMPLAINT FOR OIL CONSUMPTION THE CAR MUST BE IN EXACTLY THE SAME CONDITION (SEE a & b BELOW) EACH TIME THE LEVEL IS CHECKED.

(a) The oil level must be checked on both occasions after the car has stood overnight, and before starting the engine.

(b) The car must be in the same position on the garage floor.

/cont'd.....

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The following points must also be observed:-

(i) Check that the dipstick is being pushed fully home against its stop.

(ii) Check that the oil wetted mark is at approximately the same height on each side of the dipstick. If the mark varies appreciably from side to side it indicates that the dipstick is bent and is fouling the baffle in the sump; this condition will wipe off oil from the dipstick this giving a false reading. It is also possible, particularly in the case of the 'E' Type, for the dipstick to slide over the top of the baffle in which case no reading will be obtained leading to the sump being overfilled.

If in the case of the 'E' Type, oil is found on the air cleaner element or in the container this indicates that the sump has been overfilled.

(iii)(a) The sump MUST NOT be overfilled otherwise the excess oil will be rapidly burned off giving a false impression of the consumption. The quantity of oil between the bottom and top of the knurled patch is approximately 2 pints.

(b) When adding oil on the above basis it must be remembered that until the engine has been run on the road and subjected to surge conditions the level will not be stabilized. Therefore ONLY the amount of oil indicated by dipstick reading (see (iii)(a)) should be put in despite the apparent slow rise in level when oil is added.

(iv) If blue smoke is not emitted from the exhausts after opening the throttles after a period on the "overrun" it can be assumed that the engine is not using oil.

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SERVICE BULLETIN

Number B.28.
Section Engine.

Sheet 1 (of 1)
Date September, 1963.

GRADED PISTONS.

Due to the omission of a heading on page B.53 of the Mark 10 and 'E' Type Service Manual it is not clear that the dimensions quoted against the Piston Grades F to K refer to cylinder bore sizes and not to the actual piston diameter.

Please, therefore, insert a heading "To suit cylinder bore size" above the dimensions quoted.

IMPROVED MATERIAL EXHAUST VALVE.

Models affected	Commencing Engine Numbers.
2.4 litre Mark 2	BJ. 1294
3.4 litre Mark 2	KJ. 1713
3.8 litre Mark 2	LC. 7503
'E' Type	RA. 2972
Mark 10	ZB. 1228

Commencing at the above engine numbers, all engines are fitted with modified exhaust valves (Part No. C.21942) of improved steel specification to give longer life.

The new exhaust valves are interchangeable with the previous type fitted.

Spares Bulletin A.123 refers.

SPARKING PLUG INSERTS.

(All Models)

When it becomes necessary to fit a sparking plug insert (C.22381) in the event of a stripped thread, a revised procedure as detailed below should be carried out. This procedure incorporates a locking pin to prevent the insert from being screwed out when removing the sparking plug.

/cont'd.....

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Bore out the stripped thread to .75" (19.05 mm) diameter and tap ½" B.S.P. as shown in Fig.1.

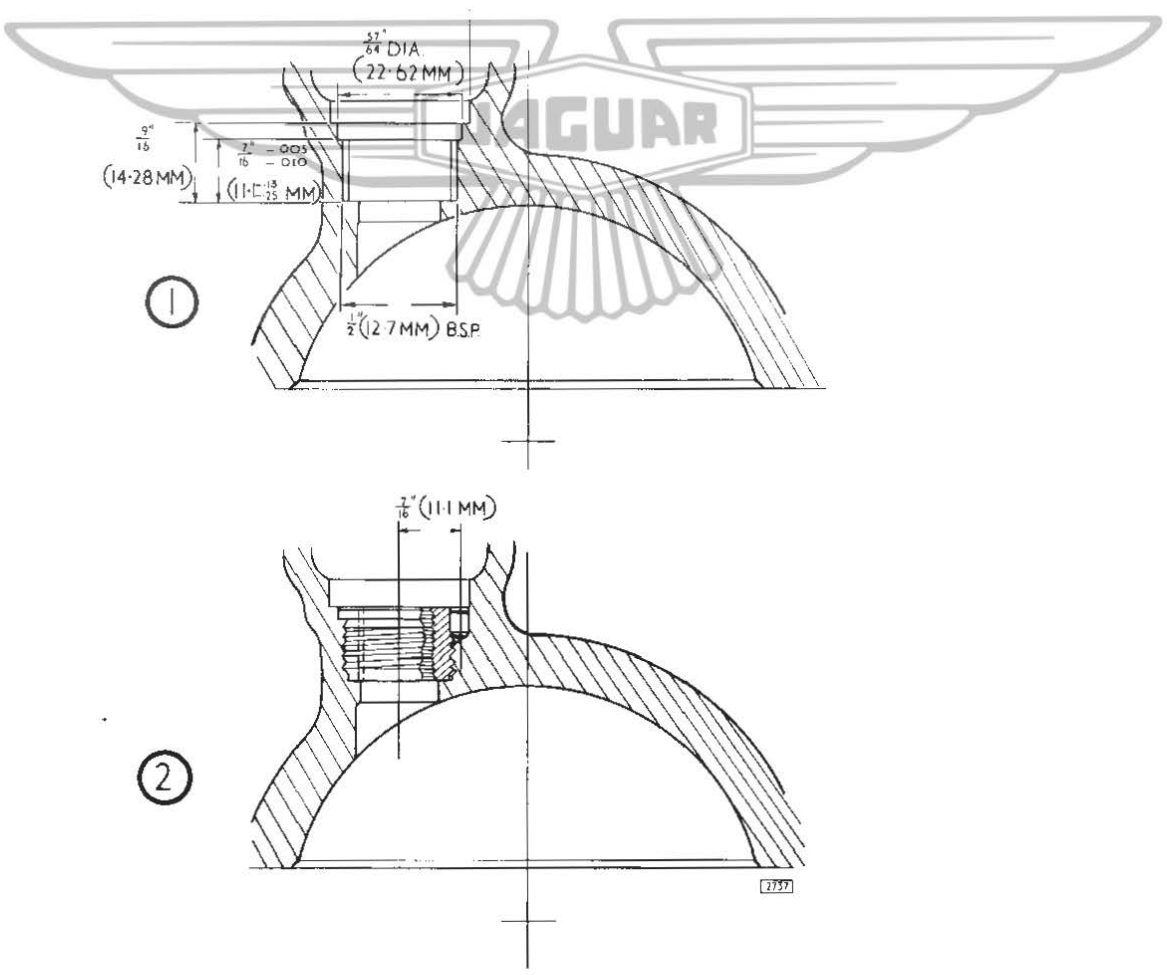
Make a counterbore 57/64" (22.62 mm) diameter to take the larger diameter of the insert as shown in Fig.1.

Fit the screwed insert ensuring that it sits firmly on the face at the bottom of the thread.

Drill and ream a ⅛" (3.17 mm) diameter hole 3/16" (4.76 mm) deep between the side of the insert and the cylinder head as shown in Fig.2.

Drive in the locking pin (C.22382) and make sure that the pin is below the surface as in Fig.2.

To secure, peen over the aluminium on the chamfered portion of the insert and also the locking pin.



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SERVICE BULLETIN

Number B.29.
Section Engine.

Sheet 1 (of 1)
Date November, 1963.

GUARANTEE CLAIMS ON SPARKING PLUGS.

(All Models)

In future, all guarantee claims relating to sparking plugs, must be made direct to Messrs. Champion Sparking Plugs Limited, Feltham, Middlesex. Sparking plugs must not be forwarded under claim, to this factory.

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JAGUAR SERVICE BULLETIN

Number B.30.
Section Engine.

Sheet 1 (of 1)
Date January, 1964.

SUMP FRONT OIL SEAL REPLACEMENT.

Models affected.	Approximate commencing engine numbers.
Mark 10	ZB 3121
'E' Type	RA 4501
3.4 litre 'S'	7B 1005
3.8 litre 'S'	7B 50348
3.4 litre Mark 2	KJ 3093
3.8 litre Mark 2	LC 8300

Commencing at the above engine numbers the sump front oil seal recess in the timing cover is modified so that the seal may be more easily replaced without removing the timing cover. It is of course, necessary to lower the oil sump, remove the crankshaft damper and cone and the distance piece when the seal can be removed.

INTRODUCTION OF THE CAST ALUMINIUM SUMP AND LARGER BORE OIL PUMP AND PIPES.

Models affected.	Commencing engine numbers.
2.4 litre Mark 2	BJ 2264
3.4 litre Mark 2	KJ 2791
3.8 litre Mark 2	LC 8068

Commencing at the above engine numbers an aluminium engine sump is fitted together with revised oil pipes and pump. The diameter's of the oil pump inlet and outlet pipes are increased. To conform with this the filter basket assembly and the by-pass hose from the sump to the oil filter are modified together with the pipe fitting. The ignition timing pointer on the front of the sump is also modified.

In conjunction with this change packing pieces are fitted under the front anti-roll bar.

The aluminium sump is not therefore, interchangeable with the steel type without fitting all the parts affected.

Spares Bulletin No. A.129 refers.

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SERVICE BULLETIN

Number B.31.
Section Engine.

Sheet 1 (of 1)
Date March, 1964.

HEAVY OIL CONSUMPTION.

Models affected.

3.8 litre Mark 2
Mark 10
'E' Type.

If heavy oil consumption is experienced on 3.8 litre engines the following measures should be taken:-

1. On engines not fitted with "Maxiflex" rings that is engines prior to L.C 3703 - 3.8 litre, ZA 3153 - Mark 10 and R.7104 - 'E' Type fit "Maxiflex" rings as advised in Service Bulletin B.21, but do NOT drill the hole in the connecting rod.

2. On engines fitted with "Maxiflex" rings, remove the piston and connecting rods and block up the squirt hole (illustrated in Service Bulletin B.21 Fig.2) in the connecting rod by lightly peening over. Fit new "Maxiflex" oil control rings.

   Note: Whilst the pistons are removed the bores should be lightly honed using a fine stone and paraffin as a lubricant.

MODIFIED PISTONS.

Models affected.	Commencing engine number.
3.8 litre Mark 2	LC. 8895
Mark 10	ZB. 3114
'E' Type	RA. 5649
3.8 'S'	7B. 50348
	plus certain individual engines prior to these numbers.

Modified pistons are now fitted in production in accordance with the following table.

/cont'd.....

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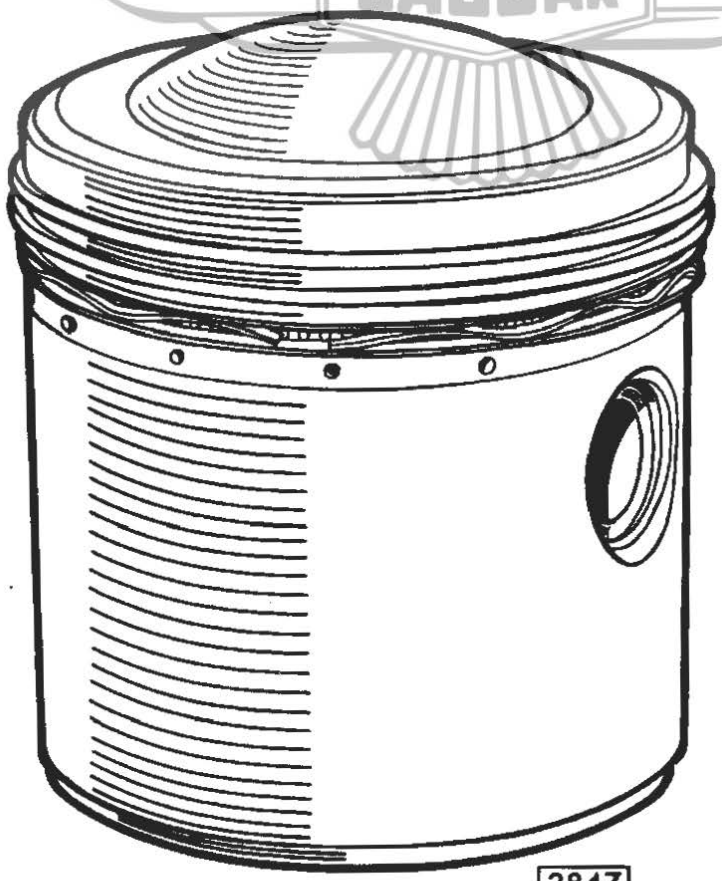
	7 to 1 comp. ratio	8 to 1 comp. ratio	9 to 1 comp. ratio
Piston	C.23508/1	C.23509/1	C.23510/1
Upper compression ring	C.23489	C.23489	C.23489
Lower compression ring	C.13797	C.13797	C.13797
Oil control ring (Maxiflex 30)	C.23490	C.23490	C.23490
or			
Oil control ring (Maxiflex 50)	C.24155	C.24155	C.24155

The new pistons have a re-designed skirt panel, a chamfer below the oil control ring with 7 drain holes and a relief at the bottom of the skirt to form a sharp edge (see illustration).

Either Maxiflex '30' or Maxiflex '50' oil control rings are fitted.

The principal difference between these two rings is that the ends of the internal ring of the Maxiflex '50' are turned at 90° and locate in a 3/32" (2.4 mm) hole in the piston ring groove, whereas the ends of the Maxiflex '30' internal ring are butted.

Note: The Maxiflex '50' ring can only be used as a replacement for earlier type oil control rings if a 3/32" (2.4 mm) hole is drilled in the bottom groove immediately above the gudgeon pin bore.



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JAGUAR

SERVICE BULLETIN

Number B.32.
Section Engine.

Sheet 1 (of 1)
Date May, 1964.

F

INTERMEDIATE LOWER TIMING CHAIN DAMPER.

Models affected.	Commencing engine numbers.
3.4 litre Mark 2	KJ.4023
3.8 litre Mark 2	LC.9103
'E' Type	RA. 6025
Mark 10	ZB.4170.

Commencing at the above engine numbers a different type of intermediate damper is fitted to the lower timing chain.

The original type secured to the upper timing chain bracket is replaced by a damper secured to two tapped bosses in the cylinder block (see illustration). Shorter bolts are now fitted to the upper timing chain bracket.

Interchangeability.

The new damper cannot be fitted in place of the previous type as the cylinder block will not have the tapped bosses.

Assembly Instructions.

When fitting a new lower timing chain, set the intermediate damper (A) in light contact with the chain when there is an ⅛" (3mm) gap (B) between the rubber slipper and the tensioner body. In the case of a worn chain the gap (B) may have to be increased to avoid fouling between the chain and the cylinder block. Set the lower damper (C) in light contact with the chain.

Spares Bulletin No. A.137 Refers.

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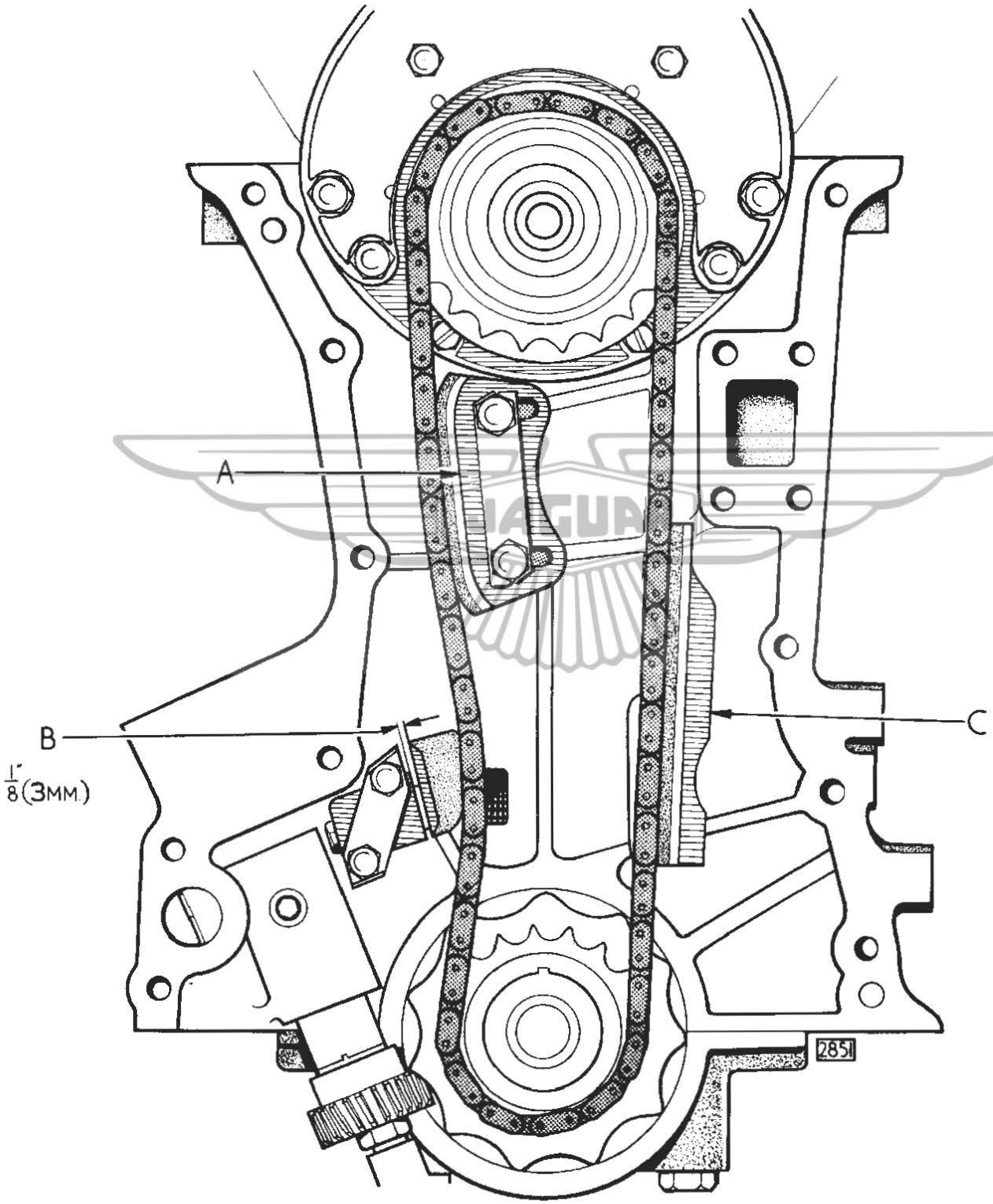

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JAGUAR SERVICE BULLETIN

Number B.35.
Section Engine.

Sheet 1 (of 1)
Date April, 1965.

WELLSEAL JOINTING COMPOUND.

(All Models)

"Wellseal" jointing compound is now available from the Jaguar Spares Division in 3¾ oz tubes Part number 10707.

This compound is recommended for use on cylinder head gaskets and the instructions for use are as follows:-

1. Remove all oil and grease from both mating surfaces of the component by means of a cloth wetted with trichlorethylene, petrol or other volatile grease solvent, wiping dry with a clean cloth.

2. Apply Wellseal with a soft brush. One coat on each mating surface will suffice in most cases, but more than one coat should be applied where the joint is known to be bad. Care should be taken to ensure that all mating surfaces are coated.

3. Allow at least five minutes for drying after application; a period of several days may be allowed to elapse if desired between application of Wellseal and assembly of the unit. There is no need to wipe off excess compound exuding from the edges of the joint, unless there is any special reason for doing so.

4. When dismantling the joint it should readily part and the compound may be removed with carbon tetrachloride, or trichlorethylene.

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JAGUAR SERVICE BULLETIN

Number B.37.
Section Engine.

Sheet 1 (of 1)
Date June, 1965.

SPARKING PLUGS - CHANGE IN TYPE.

Model affected.	Commencing engine number.
4.2 Mark 10	7D.51589

Commencing at the above engine number Champion N.11Y sparking plugs are fitted in place of Champion N.5 type.

N.11Y plugs can be fitted in sets in place of the N.5 when normal replacement becomes necessary.

Spares Bulletin No. A.173 refers.

REVOLUTION COUNTER GENERATOR DRIVING DOG - CHANGE IN MATERIAL.

Models affected.	Commencing engine numbers.
2.4 litre Mark 2	BJ.5000
3.4 litre Mark 2	KJ.7506
3.8 litre Mark 2	LE.2384
3.4 'S' Type	7B.4921
3.8 'S' Type	7B.57695
4.2 Mark 10	7D.51619
4.2 'E' Type	7E.4027

Commencing at the above engine numbers a modified type of Rev: counter generator driving dog (Part number C.25426) is fitted. The new dog is of bonded steel/rubber and will be supplied as a replacement for the plastic type (C.16772) when sufficient supplies are received.

Spares Bulletin No. A.174 refers.

SHELL SUPER MOTOR OIL.

(All Models)

This new Shell 10W/40 multigrade oil, which replaces the X-100 multigrade 10W/30 and 20W/40 oils, is recommended for all Jaguar cars.

As with other multigrade oils, if Shell Super Motor Oil is used in an engine that has previously been run on a straight SAE30 or 40 oil a slight increase in oil consumption may be experienced but this will be compensated by the advantages gained.

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SERVICE BULLETIN

Number B.40
Section Engine

Sheet 1 (of 1)
Date April, 1966

OIL FILTERS

(All Models)

Following Service complaints of oil leaks from engine oil filter Units it is now ESSENTIAL that the sealing ring, located in the filter head, is renewed each time the canister is removed from the unit.

This applies to all Routine Maintenance periods including the Free Service.

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JAGUAR SERVICE BULLETIN

Number B.47
Section Engine

Date March, 1967

VALVE GUIDES WITH CIRCLIP RETAINERS

Models affected	Commencing Engine Numbers
2.4 litre Mk.2	BJ.5736
3.4 litre Mk.2	KJ.8772
3.8 litre Mk.2	LE.3443
3.4 litre 'S' Type	7B.7090
3.8 litre 'S' Type	7B.60959
4.2 litre Mk.10	7D.53851
4.2 litre 'E' Type	7E.7150
4.2 litre 'E' Type 2 + 2	7E.50022

Commencing at the above engine numbers, circlips are fitted to the valve guides to ensure positive location in the cylinder head. The circlip registers in a counterbore machined in the cylinder head.

The outside diameter of the guide is reduced at the lower end and to provide a "lead-in" when fitting the guide to the cylinder head. The inlet and exhaust guides are of different lengths, the inlet being the shorter of the two.

Service replacement guides are available in the following oversizes:-

	Part No.	Outside Diameter	Oversize
Inlet	(C.26198	.506/.507" (12.85/12.87 mm.)	+.005" (.13 mm.)
	(C.26198/1	.511/.512" (12.97/13.00 mm.)	+.010" (.25 mm.)
Exhaust	(C.26195	.506/.507" (12.85/12.87 mm.)	+.005" (.13 mm.)
	(C.26195/1	.511/.512" (12.97/13.00 mm.)	+.010" (.25 mm.)

Replacement

Heat the cylinder head by immersing in boiling water for 30 minutes.

With a piloted drift, after first removing the circlip, drive out the old valve guide from the head.

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Ream the valve guide bores to the following dimensions depending on the oversize guides required.

(i) .505" $^{+.0005"}_{-.0002"}$ (12.83 mm. $^{+.012\ mm.}_{-.005\ mm.}$)

(ii) .510" $^{+.0005"}_{-.0002"}$ (12.95 mm. $^{+.012\ mm.}_{-.005\ mm.}$)

Note: It is imperative to ream the valve guide bores to these dimensions as forcing oversize guides into unreamed holes is likely to crack the cylinder head castings.

Earlier cylinder heads can be modified by making circlip recesses by either:-

(a) Counterboring 0.593/ (15.06 mm.) x .04" (1.02 mm.) deep. This is the preferred method, see Fig. 1.

(b) Chamfering at 45^{o} as shown in Fig. 2.

Coat the valve guides with graphite grease and fit the circlip. Re-heat the cylinder head.

With a piloted drift, drive in the guide from the top until the circlip registers in the counterbore (or seats on the chamfer) of the cylinder head. Visually check that the circlip has seated correctly.

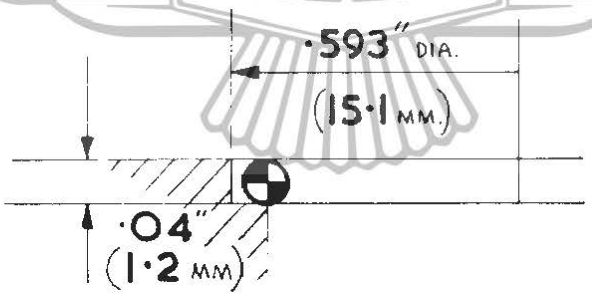

FIG. 1 COUNTERBORED

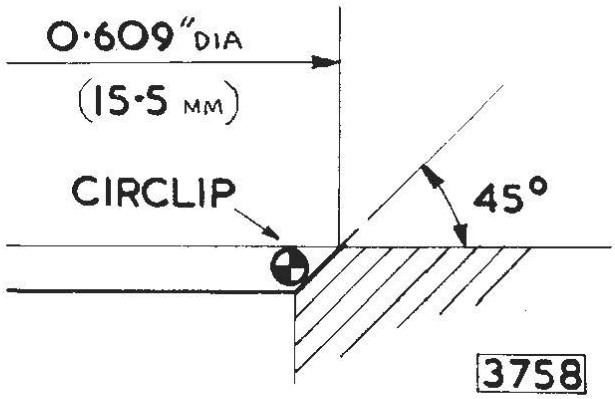

FIG.2 CHAMFERED

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JAGUAR

SERVICE BULLETIN

Number B.49
Section Engine

Sheet 1 of 1
Date March, 1967

MAIN BEARING CAP BOLT LOCKWASHERS

Models Affected	Commencing Engine Numbers
2.4 litre Mark 2	BJ.7577
3.4 litre Mark 2	KJ.10971
3.8 litre Mark 2	LE.4166
3.4 'S' Type	7B.9687
3.8 'S' Type	7B.64800
420	7F.4467
420G	7D.56172
4.2 'E' Type	7E.12961
4.2 'E' Type 2 + 2	7E.53288

Commencing at the above Engine Numbers, the main bearing cap bolt lockwashers were replaced by plain washers.

The washers are fully interchangeable.

The torque figures for the nuts remain as stated in the appropriate Service Manual.

Part No. (Plain Washers) C.28082

Quantity (per Engine) 11 off - 4.2 'E' Type and 2 + 2
12 off - All other models

Spares Bulletin A.203 refers.

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SERVICE BULLETIN

Number B.50
Section Engine

Date January, 1968

CAMSHAFT SPROCKET ADJUSTING PLATE

Models Affected	Commencing Engine Numbers
Mark 2 - 2.4 litre	BJ.8040
Mark 2 - 3.4 litre	KJ.11548
Mark 2 - 3.8 litre	LE.4225
'S' Type - 3.4 litre	7B.9772
'S' Type - 3.8 litre	7B.64823
420	7F.5997
420G	7D.56496
4.2 'E' Type (2 + 2)	7E.53654
4.2 'E' Type	7E.13780

Commencing at the above engine numbers an improved type of camshaft adjuster plate is fitted.

The new plate incorporates the guide pin, clamping plate and adjusting plate as a complete assembly and is fully interchangeable with the previous type.

The valve timing procedure remains unaltered.

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JAGUAR SERVICE BULLETIN

Number B.51
Section Engine

Date January, 1968

GUM DEPOSITS ON INLET VALVES

All models

To all Distributors and Dealers

Attention is drawn to the fact that under conditions of prolonged storage, chemical changes can occur in certain of the additives used in many present-day fuels. The results of such changes remain in the fuel and will be drawn into the engine along with the fuel pumped from the tank(s) when a car is re-started following an extended period out of use. As the engine is warmed, gum deposits may form on the inlet valves as a result of the presence of additives affected by chemical changes. These deposits may cause the inlet valves to stick, with the possible consequence of severe engine damage.

It is suggested, therefore, that fuel should be completely drained from the tank(s), filter, and carburetters of any car which is likely to be off the road for a long period.

If regulations permit, the tank(s) of any car subject to short-term storage should ideally be completely filled so as to present a minumum surface area of fuel to the atmosphere.

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JAGUAR

SERVICE BULLETIN

Number B.70
Section Engine

Date July, 1969

REPLACEMENT CRANKSHAFTS
(2.4/3.4/3.8 Mark 2 - 3.8 'E' type)

Supplies of Crankshaft C.8628 for the above cars are now completely exhausted. Jaguar Spares Division will, therefore, in future, supply Crankshaft C.8628/1 only, as a replacement against all orders received.

It is IMPORTANT to remember that when fitting the new Crankshaft it is imperative that the revised Rear Cover and Oil Seal Assembly (reference Spares Bulletin A.66) obtainable under Part Number C.19648/S, is also fitted.

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JAGUAR

SERVICE BULLETIN

Number B.70
Section Engine

Date July, 1969

REPLACEMENT CRANKSHAFTS
(2.4/3.4/3.8 Mark 2 - 3.8 'E' type)

Supplies of Crankshaft C.8628 for the above cars are now completely exhausted. Jaguar Spares Division will, therefore, in future, supply Crankshaft C.8628/1 only, as a replacement against all orders received.

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